

WHAT IS CLAIMED IS:

104060-0304401

1. A tape cassette comprising an upper half and a lower half combined with each other, being utilized for an apparatus, which is provided with a light emitting section for detecting a tape end of a magnetic tape and a light receiving section for detecting the tape end of the magnetic tape by receiving a detection light beam irradiated by said light emitting section and detects a tape end such that the detection light beam irradiated by said light emitting section reaches to said light receiving section in a level of luminous energy more than a predetermined luminous energy level, wherein a light path of the detection light beam crosses the magnetic tape installed in said tape cassette, said tape cassette is further characterized in that at least said upper half is made by a material having high optical transparency, and that a hole for light path is formed on a side surface of said upper and lower halves so as to pass the detection light beam irradiated by said light emitting section to said light receiving section, and that undesired light other than the detection light beam in said predetermined luminous energy level is prevented from reaching to said light receiving section by roughening an outer side surface of said upper half adjacent to said hole for light path and/or an outer side surface of said lower half.

2. The tape cassette in accordance with claim 1, wherein an area on said outer side surface of said upper half above said hole for light path is roughened.

3. The tape cassette in accordance with claim 1, wherein said tape cassette further comprises two pairs of upper and lower flanges provided with a hub for wrapping said magnetic tape around the hub, and wherein a top surface and/or a bottom surface of each of said upper flanges is roughened.

4. A tape cassette comprising an upper half and a lower half combined with each other, being utilized for an apparatus, which is provided with a light emitting section for detecting a tape end of a magnetic tape and a light receiving section for detecting the tape end of the magnetic tape by receiving a detection light beam irradiated by said light emitting section and detects a tape end such that the detection light beam irradiated by said light emitting section reaches to said light receiving section in a level of luminous energy more than a predetermined luminous energy level, wherein a light path of the detection light beam crosses the magnetic tape installed in said tape cassette, said tape cassette is further characterized in that said upper half is made by a material having higher optical transparency and said lower half is made by a material having lower optical transparency, and that undesired light other than the detection light beam in said predetermined luminous energy level is prevented from reaching to said light receiving section by forming a hole for light path only on a side surface of said lower half for passing the detection light beam irradiated by said light emitting section to said light receiving section.

5. The tape cassette in accordance with claim 4, wherein said

tape cassette further comprises two pairs of upper and lower flanges provided with a hub for wrapping said magnetic tape around the hub, and wherein a top surface and/or a bottom surface of each of said upper flanges is roughened.

6. The tape cassette in accordance with claim 4, wherein said lower half is made by a material without optical transparency.

7. A tape cassette comprising an upper half and a lower half combined with each other, being utilized for an apparatus, which is provided with a light emitting section for detecting a tape end of a magnetic tape and a light receiving section for detecting the tape end of the magnetic tape by receiving a detection light beam irradiated by said light emitting section and detects a tape end such that the detection light beam irradiated by said light emitting section reaches to said light receiving section in a level of luminous energy more than a predetermined luminous energy level, wherein a light path of the detection light beam crosses the magnetic tape installed in said tape cassette, said tape cassette is further characterized in that at least said upper half is made by a material having high optical transparency, and that a hole for light path is formed on a side surface of said upper and lower halves so as to pass the detection light beam irradiated by said light emitting section to said light receiving section, and that undesired light other than the detection light beam in said predetermined luminous energy level is prevented from reaching to said light receiving section by roughening an inner side surface of said upper half adjacent to said hole for light path and/or an

inner side surface of said lower half.

8. The tape cassette in accordance with claim 7, wherein an inside surface of said upper half above said hole for light path is roughened.

9. The tape cassette in accordance with claim 7, wherein said upper half is made by a material having higher optical transparency and said lower half is made by another material having one of lower optical transparency and non optical transparency, and said tape cassette is further characterized in that a protrusion is formed on said upper half in a neighboring area of said hole for light path.

10. The tape cassette in accordance with claim 7, wherein said upper half is made by a material having higher optical transparency and said lower half is made by another material having one of lower optical transparency and non optical transparency, and said tape cassette is further characterized in that a protrusion is formed on said lower half in a neighboring area of said hole for light path.

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